

**CLAIMS:**

1. Permeable and elastic pavement blocks comprising a permeable concrete layer consisting of aggregates of the size in the range of 5-13mm, cement, water and admixture products; a primer layer; and an elastic layer from the bottom to the top,

wherein the permeable concrete layer has the compressive strength of 100 kg/cm<sup>2</sup> or more and the permeability coefficient of  $1 \times 10^{-3}$  cm/sec or more;

the primer layer comprises 10-20 % by weight of PPG, 5-10 % by weight of TMP, 5-10 % by weight of 1,3-BG, 15-25 % by weight of TDI, 49-64.9 % by weight of a solvent (xylene or methylethylketone), and 0.1-1.0 % by weight of an additive (defoaming agent); and

the elastic layer is prepared by mixing waste-polyurethane chips and a binder in the weight ratio of 3:1 to 5:1, the waste-polyurethane chips having the size of 1 to 5 mm and the binder comprising 50-70 % by weight of PPG, 5-10 % by weight of PBG, 3-5 % by weight of 1,3-BG, 20-30 % by weight of MDI and 2-5 % by weight of TDI.

2. Permeable and elastic pavement blocks as claimed in claim 1, wherein the waste-polyurethane chips are obtained by collecting waste-polyurethane scraps from soles of shoes, parts of toys, parts of refrigerators and vehicles, decrepit polyurethane resilient pavement, etc. and separating the scraps according to their colors; removing impurities attached on the scraps; pulverizing the waste-polyurethane scraps in a predetermined size; adding 0.3-1.0kg of stearic acid, 20-30kg of heavy calcium carbonate, 0.1-2.0kg of titanium dioxide and 5kg or less of a pigment or 20-40kg of a

photoluminescent pigment, based on 100kg of the pulverized waste-polyurethane scraps and mixing them by stirring; heating and extruding the mixture in the form of a plate; and then condensing and cutting the extruded mixture into the size of 1 to 5 mm.

5                    3. Permeable and elastic pavement blocks as claimed in claim 2, wherein a flame retardant is added to the mixture in the range of 1-2% by weight of the scraps in preparing the waste-polyurethane chips.

                     4. Permeable and elastic pavement blocks as claimed in claim 2,  
10 wherein depending on usages of the elastic pavement blocks, a foaming agent is used to adjust the hardness of the waste-polyurethane chips.

                     5. Permeable and elastic pavement blocks as claimed in claim 3,  
wherein depending on usages of the elastic pavement blocks, a foaming agent is used to  
15 adjust the hardness of the waste-polyurethane chips.

                     6. Permeable and elastic pavement blocks as claimed in claim 1,  
wherein the waste-polyurethane chips can be replaced in part with new polyurethane chips.

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                     7. Permeable and elastic pavement blocks as claimed in claim 2,  
wherein the waste-polyurethane chips can be replaced in part with new polyurethane chips.

8. Permeable and elastic pavement blocks as claimed in claim 7, wherein the new polyurethane chips are prepared by mixing 1 part by weight of liquid polyurethane with 0.5-1.2 parts by weight of heavy calcium carbonate, and 0.01 part by weight or less of a pigment or 0.1-0.4 parts by weight of a photoluminescent pigment; 5 pouring the mixture in a mold and curing in a sheet form; and then pulverizing the polyurethane sheet in the size of 1-5mm.

9. Permeable and elastic pavement blocks as claimed in claim 2, wherein the blocks produced by using the waste-polyurethane chips or the new polyurethane 10 chips using the normal pigment are arranged as previously designed, and the blocks produced by using the waste-polyurethane chips or the new polyurethane chips using the photoluminescent pigment are also arranged according to a predetermined design.

10. Permeable and elastic pavement blocks as claimed in claim 8, wherein 15 the blocks produced by using the waste-polyurethane chips or the new polyurethane chips using the normal pigment are arranged as previously designed, and the blocks produced by using the waste-polyurethane chips or the new polyurethane chips using the photoluminescent pigment are also arranged according to a predetermined design.